567

The Scholar

SEPTEMBER 1936

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7 - NOV 1936
MADRAS

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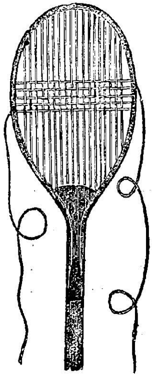

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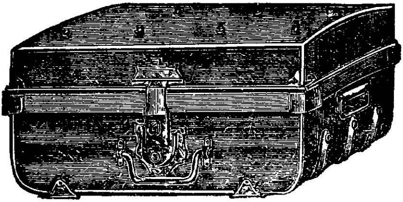

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THE SCHOLAR

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"Mir"

(DIARY LEAVES)

BY NICHOLAS ROERICH

MIR—this word in Russian means both the universe and peace. Not without reason are these two great conceptions united in one sound. If one imagines the universe one also realizes peaceful labour. Beginning work, one also becomes conscious of the Universe.

People talk especially about peace when they are afraid of war. But there are different kinds of wars: internal and external. Visible and invisible. Which of them are more horrible remains to be seen......

"Indeed, the worst calamity for ancient and present humanity, is that their greatest poet, the wise blind Homer, appeared to be a bard of war and not of peace. Together with his faith in the gods, he also lost faith in peace.

> There is and there can be no union
> between lions and men.
> Wolves and sheep cannot live in
> hearty concord.
> Eternal foes they are—hostile against
> each other,
> Hence between us love is impossible.
> No concordates
> Can exist between us, until one is slain,
> Feeding with his blood the fierce god Arius.

This means that "everybody will kill each other."—"In the universe there will be no end of war..."

"Through the Iliad—the war of Troy—begins endless war, which throughout ages lasts until our days"—exclaims Merejkovsky in his "Atlantis." There are many soul-stirring lamentations. And Dante has found infernally burning abodes for murderers and all malefactors.

And there are also other testimonies.

On the Eastern shore of Crete in Palaicastro—the ancient Heleia, which was the capital of the island about 1400 B. C. there was found an ancient hymn, one of the most beautiful and simple prayers of humanity:

Great Curos, rejoice,
Oh Ruler of joy—rejoice!
Thou proceedest
Leading the spirit.
Come to us, on the mount of Dictea
And rejoice in song and dance!
Let us greet Thee on lutes
With flute accompaniment,
And let us sing, encircling
The infallible Altar.
For here, Thou, The Immortal Child,
Was hidden by shield-bearing guardians
Who accepted Thee from Rhea.
And many fruitful years commenced
And mortals cognized the truth,
And even wild beasts were tamed
By all-blissful Peace!

"Mir"—Peace—in this one word is expressed the whole essence. "To live in peace means never to raise arms against each other" this commandment was given in all languages, at all ages.

And on the Eastern side is—Curos, and on the Western Quetzalcoatl—both are messengers of peace; they both "close their ears when they hear of war". In Kanaan. Melchizedek the King of Salim—the King of Peace—blesses Abraham in the name of Adonai, the God of Peace. Thus in all religions, the first word is "peace".

When one studies symbols and tablets, one will find in all images and hieroglyphs the same desire—the sacred prayer for peace.

"Do not do evil to animals" is the ordainment of Triptolemus, the messenger sent by Demetra to savage people after the great flood; Triptolemus was to teach people agriculture and to uplift them from the bestial to human life. "Do not do evil to animals" in Biblical language means: "Blessed be those who have pity for everything living" because "all living beings

together suffer and wail up to now"—they suffer together with man,—they perish with man, or they are saved with him.

Should man kill animals in order to feed on meat? No, by no means ordains Demetra, the fruit-bearing goddess. With bloody food there enters into man the spirit of killing, the spirit of war, but the spirit of peace enters only through bloodless food.

> And Hesiod, the shepherd on Mount Helicon sings:
> "God made it a law for beasts, birds and fishes
> To devour each other—because they do not know the Truth.
> But to man God gave the Truth!"

The truth: do not kill! For everybody it is always possible not to kill—not to make war. "If you shall kill—you will die; give life and you will live: a child understands this, and yet this is mystery of mysteries!"

Should one defend Culture? Yes, one should, always and in everything.

Should one help the workers of culture, the depressed and burdened? Yes, one should, always and in everything.

Should one unite around the sign of culture, in order to conquer the attempts of destruction and decay? Yes, one should, always and in everything.

Perhaps culture, knowledge and beauty are sufficiently guarded and affirmed? No, they are not.

Perhaps everywhere the foundations of culture are already strongly fortified? No, unfortunately they are not.

Perhaps the workers for culture are especially safeguarded by law and in the conciousness of the people? We wish it were so!

As before, the League of Culture, as the voice of public opinion, is indeferrably needed!

We have to invoke peace-non-killing. What does this mean! Is it possible that milleniums have not taught people that which has been ordained by all Commandments?! But what do we see? The further we go, the more one has to reiterate the necessity of peace. Where is evolution, when a monster gun is already loaded and death-bringing poison is madly sown? People became so skilful that poison and death already fall from the blue sky. From the same blessed sky, from whence was bestowed only blissful prana—the panacea.

What has happened? Under the ground there are explosive mines and threatening gangways! From the blue sky comes poison and death! The barrels of gigantic guns are proudly raised. Probably there will soon be a "festival of the shell", when it will accomplish a flight around the world. When it will destroy everything that can be destroyed.

"People cannot guess before what terrible danger humanity stands in case of a new war"—writes Prof. Andre Meier. "The poison gases of the last war are child's play in comparison with what we shall see if a new war breaks out"—adds another expert, Prof. Cannon of Columbia University. According to Dr. Hilton Jones of New York, a newly invented gas can destroy a whole army as easily as "blowing out a candle".

Truth! The inventor of poison believes that he creates truth. The makers of guns are proud that their tools will annihilate a man even beyond the horizon. The forger of the sword anticipates that his steel will penetrate all hearts.........Such are the thoughts of man!

Helas, not such a truth is needed! "Mankind needs another Truth" says Gorky: a Truth which would blissfully strengthen creative energy". A Truth is needed, which would stimulate mutual trust and striving towards goodwill.

Others make impenetrable armour and shields. Perhaps they hope to create a defence against all evil influx? Let it be so.

The defence of culture, the defence of the motherland, the defence of human dignity does not think of violent usurpation. The armour of defence is not the poison of destruction. *Defence is justified and attacks are condemned.*

It has some special meaning that in Russian Mir is synonymous for peace and for the universe. This synonym is not due to a poverty of the language. Indeed, the language is rich. They are synonymous in their essence. Verily, the universe and a peaceful creativeness are indivisible. From ancient times this salutary synonym had a special mission.

Mir—the universe and mir—the peaceful universal labour; a creative sowing, the beauty of the world—the conqueress.

Tales from Indian History.

BY V. RANGACHARYA, M. A.

III

WASSANTARA (WETHANDAYA) THE GIVER.

PERHAPS the most popular story in Burma and Siam is that of Wassantara, born a prince among men but famous for all time as the prince of givers. He was, so says tradition, the Buddha himself in the last of his previous births, wherein he rose to the height of a Bodhisatva's life indicating his fitness for the next birth as the perfect Buddha. The story has been immortalised by the sculptor's chisel and the painter's brush; and rare indeed is man or woman in these lands, ignorant of the prince who gave away everything held dear by man at the altar of *dharma*.

Prince Wassantara was the son of King Visvamitta,—the best and the most handsome of the princes of the land, a veritable God in appearance and carriage. Of lofty stature, strong build, and proud feature was he; and he had a dignified deportment which won universal respect. He had a golden complexion, long arms, a high forehead, aquiline nose, and long and meeting eye-brows. Heaven made him not only with a beautiful body but with a liberal heart; and he made gifts with such open hands that thousands of sad faces were cleared, and his name was mentioned with gratitude in every nook of the world!

But King Visvamitta was not at ease. He believed that his son had no balance, that he was an indiscreet prodigal who had unduly foolish faith in mankind, and that he was unfit to wear the sceptre. He always raved against his unworldly ways, and in a fit of anger, banished him from the kingdom.

Wassantara did not feel wronged. His nature nursed no grievance, and his philosophy thrust all dark thoughts from his mind. Resorting to his wife Maddi, he spoke of his resolve to end his days in solitary contemplation in the woods.

Now, Maddi loved her husband with every fibre of her being. She felt that life without him would be a big void, an eternal unendurable misery. Asserting that a woman's life without her husband was like the sky without the moon and the earth without water, she pleaded that she would go with him to the end of the world and that she would stick to him through thick and thin. And so, hand in hand, with one mind and resolve, they went as

exiles into the wilds, their sole companions being their two children, Jaliya and Krishnayina.

Days passed, and a further testing of Wassantara came. Aware of his nature, a Brāhman begged of him to give him his chariot. Maddi had gladly followed her lord, but felt that he had gone far enough! The days of hardship had deprived her of her youthful curves. Life in the woods had stamped its bitter hues on her frail being, and she was too weak to rise to the heights of Wassantara's sacrifice. Her face grew grim and stern at the sight of the beggar, so fair to sight and so heartless underneath, and she begged of her lord to send him away empty-handed as he deserved!

But Wassantara was sorely pained at his wife's fraility. He showed to her kindly but firmly how her mind was still darkened by the veil of ignorance and how she failed to see things clearly. The joy of *giving*, he said, would never be felt if there was no *asking* in the world! The more precious the request, the more chance there was for the giver's conquest of insight. The Brahman petitioner was a benefactor who wanted to take away their earthly chariot to enable them to ride on the chariot of dharma! Maddi was touched. Uttering a groan in the agony of her newly-awakened mind, she joined her lord in thrusting the precious gift into the hands of the beggar.

Parting with his chariot and horses, Wassantara took the children on his shoulders, and entered the thick of the woods. Husband and wife built a hermitage of thatches and leaves, and were as happy there as in their old palace. They ate roots and fruits. Ignorant of the vices and luxuries of wordly life which sapped the human strength, they lived in a world of their own, and derived supreme happiness.

Then came the time for a fresh and weird trial. A hunchback came to the hut at the time when Maddi was gone out in search of roots, and asked the prince for a gift which, for the moment, took his breath away! "Long have I wandered," said the suppliant, "in the forest without help and without servants. Grateful shall I be, if you, a Kshatriya saint, so renowned for charity, could give me, a poor helpless Brahman, your children!"

Wassantara was struck with horror. He realised what awful thing his vow meant. The demand pulled his heart-strings to pieces, and stirred as he had never been, he lost his air of calm and power. He lost control of himself, and in anguish refused to grant the prayer. But only for a moment. Lashed with the sting of sarcasm and the charge of hypocrisy, he recovered, and argued with himself: "There is nothing like sacrifice to show

the way to enlightenment, to raise men from the abysmal depths of ignorance. Without suffering death cannot be conquered! Without courage the battle cannot be won!" So, with a set face which was an index to the conquest of his bleeding heart, he bade farewell to his perplexed and weeping children, afraid to wait till their mother returned!

The immensity of the sacrifice abashed and over-awed nature itself, and threw it into convulsions. The earth quaked repeatedly, and the elements were agitated. The Gods proclaimed their joy and their admiration of the wondrous mind which preferred the loss of children to the breach of vow which showed such singular imperviousness to the seductions of life and love.

A moment later, Maddi returned. There had been a strange foreboding of disaster in her mind. As she approached the hermitage, she had missed the sights which were the only delights in her new hard life. She missed the rush of the children to her arms; she saw the hut silent like death and deserted by the sweet voices which had made it a paradise. She saw with an instinctive fear which tugged at her heart the little clay-house they had built and the little dolls which had been their companions left uncared for!

Approaching her husband who was beaming with a new joy, she learnt the tragic news. She fell at once into a swoon, and lay like fish out of water, like a cow robbed of its calf! Sorrow and resentment surged within her and, forgetting the role of the obedient complacent wife for the time, she then openly lamented her sad fate. "Lord of my heart, how could my dear ones bear separation? Like tender lilies they would suffer. Like the innocent antelopes chased by the hunter they would have to endure tortures in the hands of strangers! Nourished from the life-blood of this body, they would pray in vain even for food and water!" With such vistas of horror in her mental vision, Maddi railed at the sinfulness in her past which, she felt, made her the victim of such a cruel jest. In her mad ravings she appealed to the plants they had watered and to the little deer with which they had played, to witness the shadow so suddenly and undeservedly cast on her life and happiness.

But Wassantara comforted her. With the serenity of a conqueror of weakness, he endeavoured to knock the weakness out of her; and he did succeed in winning her over to his code of perfection. So complete was his victory that he was thrown into surprise by her offer of her very self for a gift, if a necessity came for it.

And the ever-vigilant God, Indra, took her at her word. Putting on the guise of a Brahman, he came to Wassantara and, with

a smile curling his lips, said : " Sir, I am in need of a slave. Fair is thy wife, matchless in her beauty, matchless in her conduct. Give her in bondage to me ! "

Maddi was taken off her balance, she realised how much worse the reality was than the thought or imagination. It had never occurred to her that she might be asked to give herself up. The proposal sent a shiver through her, and she blamed her tongue for uttering things which her heart disapproved. With eyes which flashed with fire, she looked at the cold and hard beggar, whose lust had dared to aspire for a princess' service, with a positively murderous expression. Maddi had over-estimated herself. She had still to fight to get the mastery over herself.

But Wassantara spoke once again, reminding her that she should prove worthy of herself ; that the loyalty to her new life meant complete sacrifice of the old fire and the old spirit ; that, far from feeling herself to be the victim of an outrage, she should regard it as an opportunity for self-effacement which might never recur.

And Maddi woke up. She felt regret for her momentary irritation, and declared that it was no longer a wrench for her. A placid, unquestioned submission, she said, was at the head of all the wife's virtues ; and, true to her word, followed the pseudo-beggar whose eyes had been all this while gleaming with an apparently sardonic amusement. And even the elements indicated the supreme sacrifice by their perturbation.

But, from amongst the tumult arose the sweet voice of the king of Gods who stood revealed in His glory, asking for any boon which Maddi might choose ! And she prayed, like a mother, for the restoration of her childern to their grandfather. And Indra did not only restore them to their grandsire's court, but left the saintly and loving husband and wife with blessings on his lips and admiration in his eyes. And the Bodhisatva reached the heights of the hermit's training, fitting himself for birth as the perfect Buddha.

IV

RANA PRATAP AND SUKTA SINGH.

Rana Udaya Singh of Mewar was an exception in the roll of Mewar's valiant Rāṇās. His feeble character was hardly adequate to the deep issues of the war with the Mughal, and he died in exile with the stamp of fatality apparently fixed on his State. The young capital Udaipur alone was in his possession ; and it seemed certain that the war had not only brought him no triumph but promised little future development. But to weakness Udaya Singh added imprudence and injustice ; and one of his

last acts was to choose for the throne, out of his 25 legitimate sons (the ancestors of the clans called Babas, Ranawuts, Poorawuts and Karawuts), a younger son, Jugmal, in preference to Pratapa Singh, the rightful heir and ideal knight. Pratap was the son of Udaya Singh by the Sonigutta princess; and her brother, as well as the Chondawut or Salambra chief, the first feudatory of the State, persuaded the nobles to set aside Jugmal's choice and elevate Pratap Singh to his proper place. Jugmal was gently led away from his royal 'cushion' by hand, the leaders remarking 'you have made a mistake, Maharaj; that place belongs to your brother'; and Pratap was girt with the sword of state. And when the nobles touched the ground thrice and paid him allegiance, they knew that happier days were dawning to Mewar; for Pratap deserved the crown not only by the right of birth but of character. A man of valour and pride, he resolved to regain Chitor at any cost. The sense of danger only steeled his resistance and burnished his armour, and Emperor Akbar could not deny that the new Rana deserved the red feather in his cap!

Now, Pratapa Singh had a younger brother named Sukta Singh who was equal to him in valour, pride and the virtues and weaknesses of his race. Once as a boy of five, he had tested the sharpness of a sword by trying it on his own body! He was a man of curt and plain speech, of absolute honesty and contempt for conventions. He was not an adept in wearing the pleasant mask of prevaricating statesmen or time-serving courtiers. His father, with a character diametrically opposite, disliked him with his whole heart; and his dislike was fanned into the flame of hatred by the prophecy of the Court astrologer that Sukta would be a bane to Mewar. The result was an unnatural order of sentence on his life!

Young Sukta was carried off to the place of execution; but just at the time when the prince was about to be done to death, the proud chief of Salumbar, who happened to hear of the news, rescued him from the tragedy, sped to the Rana, begged permission of him to adopt the youth, and then took him away to his estate. Sukta was brought up as the presumptive heir of the Chondawuts; but life which had so cruelly used him in the past seemed to still persist in doing so! The Salumbar Chief had sons in his old age; and naturally his mind ached for the children of his own blood in preference to the son of his adoption. Sukta, however, was saved from making his benefactor feel the pangs of undue sacrifice for his sake; for, by this time, Udaya Singh had died, and Rana Pratap had come to the throne; and one of Pratap's acts was to recall his brother to the court.

Sukta was grateful to his brother and king, and lived for a time with him in the happiest of terms. A man who valued honour

like everything else he planned with his brother the grim and unyielding struggle with the mighty array of the Mughal. But, Providence, it seemed, was not for their joint action. They were too equal in might and too proud in spirit to act together. Neither could long brook the lead of the other. Born egotists, their faces were clouded at the least scent of imagined discourtesy or diminished idol-worship. And so, a trifle converted their affection into hatred. They were once gone on a chase. In the course of the return journey, a playful dispute arose as to which had bagged more game; and as each claimed to have done better, he offended the other. Sukta did not want that he should be regarded as the second to his brother, Rana as he was. Having the highest estimate of himself he insisted on everybody else agreeing with him! So the brothers came to frown at each other. The sense of lacerated vanity banished the higher qualities of the soul and the affections of fraternity. Pratap would have gladly shown Sukta the door and lost sight and count of him for ever but for that very pride which made him see in his brother's independence an open rebellion. They ceased to talk to each other and in place of fraternal smiles, each got from the other the leer of a satyr and the frown of an enemy!

This animal state amongst the brothers became the subject of comment everywhere. In the court, the camp, the city and the village, the brothers became the targets of anxious and sorrowful glances; but none dared to intervene. But one great soul eventually undertook the task. This was the venerable Purohit, a true Brahman, who had eaten the salt of the Raj for half a century and who was prepared to give up his very life for saving its name and face. He talked to the brothers with all the earnestness he could. He pointed out how the Mughal had practically enslaved the whole Rajput race, how a tiny fraction of its independence alone remained, thanks to Udayapur, and how even this was in jeopardy on account of their unnatural and reprehensive animosity. The high mission of Mewar, he said, on which the hope of the Rajput lay, was endangered by their childish and suicidal vanity.

The Purohit's advice was not without effect; but the deeply ingrained jealous nature of the brothers seemed to make a permanent reconciliation impossible, till a terrible tragedy brought them to sense. While practising lancery in company with several nobles, the brothers once again came to a clash. The brow of each wrinkled in deadly frown, and they flew at each other. Horse attacked horse and lance clashed with lance. Each was for breaking the proud spirit of the other or dying! The world was too small to contain both!

But just at the moment when the fratricidal tragedy was about to be perpetrated, there arose a noble figure of self-inflicted martyrdom. The aged Purohit was once again between the combatants. He pleaded, but pleaded in vain, for peace! Seeing that the imperiously insistent craving for vanity amongst the brothers could not be conquered by him, he resolved to end his days rather than see that the kingdom which he had helped to survive Islam for half a century was brought to wreck and ruin by two ill-tempered and thoughtless brothers. And before anybody could divine what was passing through his mind, the venerable man took out a sword from the folds of his dress and poured the life-blood of his holy and wrinkled sinews into the soil. He could do nothing else, he who had spent half a century in loyal and devoted service. He had seen the Raj great in the midst of the gravest vicissitudes; and he would not see it dragged to the depths of iniquity by the presumptuous folly of the children of him whom he had served so well and so long, children brought up under his own eyes but traitrous to his teachings, and disrespectful to his grey hairs!

The unexpected self-sacrifice of the aged priest did not prove to be the bridge across the gulf which had separated the brothers. The death of one, so great, so loving and so venerable, might have abashed them and made them ashamed of themselves. There might have flashed before their eyes the endless succession of the aged man's kindnesses, prayers, and services; and they might have mingled their lamentations for the martyr with sincere expressions of self-reproach and repentance. The swords might have been sheathed, and the brothers become brothers again. The unforgettable scene of the old man's death might have kept them together for ever in weal and in woe; and with one mind and heart, they could have turned their swords against the Mughal.

But this did not happen! Therein lay the Rajput pride, the Rajput obstinacy. Waving his arms to his brother to take himself off and to avoid his sight for ever, Pratap Singh hastened to expiate his criminal neglect of the priest by sincere repentance and generous obsequial offerings, and "made an irrevocable grant of Salaira to his son, still enjoyed by his descendants, while a small column yet identifies the spot of sacrifice to fidelity."

Banished from Udayapur, Sukta, in whose life vindictive feeling sprang up like flame, resorted to Akbar and offered his services. As for the Mughal emperor he welcomed the sullen and bitter refugee who so vehemently unbosomed himself of his wrongs and desires. He knew that in him there was a hero who was all the more heroic with his touch of malice. And in the years which followed, Sukta was true to his sovereign, and employed the fire of his heart and brain against his own native land. Like almost

every other Rajput of his age he came under the spell of Akbar's policy and patronage.

Soon after, in 1576, was fought the well-known battle of Haldighat, sixteen miles to the east of Udayapur. The Rajput king displayed a heroism which gained universal admiration; but he had to fight against tremendous odds and his own country men, and he was over-powered. Wounded and sore, the Rana had to leave the battlefield for the hills. He was mounted on his horse *Chuytak* and it was also wounded and weary,—indeed on the brink of death. Horse and man were then pursued by two Afghans. The Rana's horse was about to give way under the weight, and Pratap felt himself for lost. No hope remained for him. He had staked his best, and he lost! While thus wrapped up in the thought of his ruin, a voice balm-like in its agreeableness, made him turn back. *Ho! nila ghora ra aswar* (ho! rider of the blue horse) was the text of that voice; and the Rana was surprised to see that it was his brother's. Sukta, who was in Selim's camp, had observed his brother flying unattended on his blue horse and, forgetting all his resentment, remembering only the fact that the greatest hero of the Rajputs, was in jeopardy, had "joined in the pursuit, but only to slay the pursuers, who fell beneath his lance; and now for the first time in their lives, the brothers embraced in friendship. Here Chuytuc fell, and as the Rana unbuckled his caparison to place it upon *Unkarro*, presented to him by his brother, the noble steed expired. An altar was raised, and yet marks the spot, where Chuytuc died; and the entire scene may be seen painted on the walls of half the houses of the capital."

Assuring his brother of his resolve to join him shortly, Sukta took leave of him and returned to the camp. The shrewd eyes of Selim detected something of the truth and, on the sacred promise of pardon in case the truth was acknowledged, Sukta acknowledged that the burthen of a kingdom was on his brother's shoulders, and that he could not witness his danger without defending him from it.

Selim kept his word but dismissed the Rajput. Sukta promptly rushed to his brother, placed his own person and his little chiefdom of Bhynsror, which he seized from the Mughals, at his service, and was in return recognized as its chief. The Suktawunts or descendants of Sukta—he had 17 sons—were ever after the foremost among the Rana's trusted following; and the title of *Khorasani Multani ca Aggul* (the barrier to Khorasan and Multan) has been ever wielded by the head of the clan in memory of Sukta's removal of the two men who had very nearly killed the only living hope of Rajputana.

Man, the Maker of his Destiny.

BY AGHORAM AIYER

UNDER the above title, the July Issue of the Prabudha Bharata publishes a writing by Swami Vivekananda which for the first time sees the light of day. Those familiar with his writings and speeches know that from page to page he wants to proclaim man as the Maker of his destiny and that his expression of this truth attains great heights of power in his jnana yoga lectures. Mankind can never fully repay its debt to him for all that he has done for it except by increasingly living up to this truth. This truth is age-old; but its expression by Vivekananda has been the most powerful during recent centuries.

In this particular writing however, his message involves a criticism, possibly, a condemnation in some respects of a branch of knowledge which has most vogue amongst Indian people and has a certain amount of vogue also amongst the people of the west. He who reads his message between the lines can make no mistake about its real intent and implication, and soon sees that he warns his countrymen only against their getting weakened by a process of self-hypnosis built upon possible planetary influences. But the careless reader, whose class is numerically very large, takes a snatch from that vigorous writing, contents himself that the study of planetary influences is no good, and is even harmful and that it is a very gross superstition and so on.

In his addresses on jnana yoga, Vivekananda has similar strong words to characterise the weakening effects of Bhakti doctrines on the human mind, although it is well known that the subject of Bhakti has been lovingly and illuminatingly treated by him. Indeed, a Bhakta is likely to point to his book on Bhakti Yoga as spiritually his greatest work. The truth of the matter is that in assessing values to knowledge and experience, Vivekananda put the highest estimate upon that order of ideas and that scheme of spiritual experience which we know of as Adwaita, and he had such consuming eagerness to dynamise and revolutionise all mankind with this knowledge, that for the moment anything else he bad in mind for comparing values merely paled into insignificance. Só far as the origin of astrological investigation in India is concerned, his theory as to a possible Greek influence on our past, and a period of great devotion to it under a powerful dynasty in South India has much appeal to me. The Nadi grantham systems

widely prevalent in South India seem to point to the possibility of a prolonged period of Astrological research in South India.

He acknowledges, from personal experience, wonderful predictions made by astrologers, but inclines to attribute the success in many cases merely to mind reading. As he points out, some predictions have hopelessly failed. But it does not seem to be correct to say that mind reading helps towards astrological prediction. I know of a man who gives wonderfully revealing and intimate things about one's life most of which I have been inclined to attribute only to mind reading, but people who largely flock to him regard as the special favours vouchsafed to him from the deity he is invoking, but ninety nine per cent of the events he forecasts for the future don't happen at all, although the past that one has lived out is brought back to one's consciousness in the twinkling of an eye. During the process he professes to go through a certain astrological investigation, but it is untrodden ground to most students of astrology. The Predictive side of Astrology means the getting a peep into the future, and I am almost certain that where you evaluate planetary influences to intelligently apprehend the future, no question of mind reading comes in.

His condemnation of those who want to find out the shortest way to become rich and leave to planets what they with their strong brain and will should do is well deserved; although it is true that most people who desire to know about planetary influences think chiefly if not exclusively, of how to become rich, the object of astrological investigation is certainly very much wider than gathering a treasure. Vivekananda rightly points out that people turn out to be fatalistic through astrolgical investigation and consequently lose initiative, driving power and courage. Weak-willed people most often cover their sluggishness and inactivity by hostile planetary influences. From all I know of astrology fatalism is no more taught by it than by any system of Indian philosophical thought. The doctrine of Karma is most often mistaken for fatalism, but those who know its implications know it to be a simple natural law by which we know that nothing happens without a cause and that causes produce sure results. If the operation of this law involves fatalism, then the world cannot help being fatalistic; but all students of Vedant know that Karma implies freedom and not fate. It is possible that a large section of mankind mistake karma for fatalism, as they would pervert the doctrine of oneness, which is the corner stone of the Adwaita to justify their selfishness. What we have to see is whether astrological investigation is based intrinsically only on the fatalistic doctrine, or whether it admits the freedom

of man to make or mar himself. The answer to this question is in favour of freedom. But a rider has to be added to the proposition. What we intelligently apprehend as to our future, from study of planetary influences, may be promoted or averted by us, as the case may be, only by our work, which means adjustment and adaptability on our part; nor does it follow that a man should become downhearted to know that a period of great trouble is in store for him and that the fountain of his energy should in consequence dry up; but even to our freedom to alter the course of destiny there is a limit, and we understand something of it with the aid of astrology.

It is true that for the human race which has been held down by strange enchaining limitations, Adwaita can never be too strongly taught and ages after us, Vivekananda will be lovingly remembered as the greatest and the most puissant of the modern teachers of this truth. But right along through life we are made constantly aware of several limiting circumstances, and an intelligent study of the limitations from whatever points of view they can be looked at is as germane to the question as the study of freedom. Looked at in this practical light, astrological investigation will yield some very fruitful results even to a real upward striving and aspiring mankind, which we may not foolishly despise.

Above all, any intelligent ratiocination on well defined basis ought to be a healthy intellectual exercise to one who pursues knowledge.

The principle of knowledge enunciated in the writing that a thing ought to explain itself, is unexceptionable; But interrelatedness is also true of the universe, and astrology builds for us the link between Earth and Heaven. Indeed, to a highly metaphysical type of mind, I should be prepared to suggest that these different planetary influences need not be taken literally, but that they stand for different curves of inner and outer experience, in the large graph of life, expressed for purposes of convenience in the language of planets. The story of the king and the minister told by the swami is a bit of pleasantry, but liable to be misunderstood. The minister belied the astrologer's predictions about his own life by cutting off his head; that this scheme of knowledge does not provide for such risks does not show it to be less useful. If a man whose length of life has been estimated at a certain age, disregard other precautions, and fall from a great height and lose life, his strange end does not falsify the prediction made regarding life. As for the condemnation of Astrologers quoted from Budha's sayings, the statement would appear to have reference to a growing evil probably prevalent in

his time, of men becoming conjurers and fortune tellers and exploiting human ignorance for their personal ends. I do not see why an upright and truthful man may not live through life with his knowledge of astrology as the only source of his living. It is possible that men of poor understanding may become weak willed by depending on outside influences for progress, and do not put forth their best efforts, because they dread planetary influences; but it is not unavoidable. The fore knowledge of the evil ahead may quite as well lead to the exhibition of courage as well as character, resourcefulness as well as adaptability. The English astrologer Alan Leo received once the reply from Vivekananda in answer to importunities for his horoscope "My dear Mr. Leo, I have taken a through ticket. I have forgotten I was ever born". But millions and millions of mankind stop at many way side stations and the rule that governs them is different.

Fools are governed by planets, but wise men rule them.

Psychic Energy.

BY GENE FOSDICK

HUMANITY gradually approaches new and vitally important discoveries in the field of energy. Electricity has, from its first crude harnessing and utilization, been developed to the point of almost instantaneous transmissions through space of energy to heat, to light, entertain, teach, kill and cure. To-day, researches in many laboratories point to the existence of a psychic energy, potentially a thousand-fold more powerful and more valuable to humanity than the energies now being utilized. Study of human eminations, the power of will and thought formulate a hypothesis that this energy may be of human generation, akin to the great cosmic energy centered in the sun and drawn from the infinite wells of space through what is imperfectly understood as the spirit.

"There is nothing abstract, as psychic energy is contained everywhere in nature and is especially expressed in man, and the task in enlightenment is to teach humanity how to use this treasure. It is entirely scientific how the waves of psychic energy act as astro-chemical rays. There can be observed regions of reaction and counteraction at the farthest distances. Not personal will, not realization of the astral world, but the accumulation of the waves of space, as the consciousness of the Cosmos, reacts upon all sensitive receivers. When people will realize the psychic energy, the New Era will affirm itself." Authority thus indicates the great possibility for researchers of the immediate future.

Marvels of Chemistry in Modern Industry.

BY K. GANAPATHI, M. Sc.

CHEMISTRY is inseparably compounded with the complex routine of catering to the calls and comforts of man. When the resources of Nature fall back in quality and quantity alike, and is not able to meet the varying demands of the rapidly advancing humanity, chemistry, springs up as a saviour and answers the needs like Alladdin's lamp. The marvellous and startling discoveries of the scientist in his attempts to unveil the secrets of nature, mediately, have served to be the structures and sound foundations of the present day important industries that concern the basic and practical problems of mans food, clothing, and comforts.

In considering the problem of man's food, we realise the need for feeding the plant kingdom for us in turn to be properly fed. The production of fertiliser—the food for the plants—thus proves to be of great importance. The inorganic nitrogen compounds, potassium nitrate and ammonium sulphate that mainly serve the purpose, have therefore to be manufactured in great quantity and adequately distributed throughout the world. For the former, the world was for long leaning on Chilie, till the Great War turned the wheels with the consequence that ammonium sulphate is now available to us much cheaper. Germany, which ably compensates its paucity in natural resources by plenty in intellectual heritage, was stopped the supply of Chilican nitrate during the Great War. But Nature sends threads to webs begun. The chemists then rose to the occasion and by actually turning of test tube laboratory reaction into a gigantic commercial possibility, successfully manufactured ammonia by utilising the till then uncared for nitrogen of the atmosphere which, unlike the Chilican nitrate, is distributed in inexhaustible quantity throughout the world. The credit of this marvellous achievement goes to the German Nobel Laureate, Fritz Haber,—the greatest of the industrial chemists of our times and the saviour of Germany during the war,—who, forced by the Nazi masquerade in Germany, lived as an exile the last months of his life paying for the sin that "his forefathers were of the somatic race from whom Europe learnt her alphabet 3000 years ago and the religion 2000 years before." Today the synthetic ammonia plants, something like 125 in number scattered all over the world, are working in full swing reducing Chilie almost to bankruptcy.

Ammonia finds immense applications in modern civilization, it being also the progenitor of nitric acid extensively used in the manufacture of explosives, dyes, plastics and a host of other products many of which are commonly handled by us with uncommon ignorance about their nature.

Another marvellous chemical achievement and a remarkable engineering feat touching the problem of food, is the saccharification of wood—metamorphosing the raw and waste wood into our valuable foodstuffs, sugar and alcohol. It is now possible commercially to obtain 'as much food per acre of wood land as per acre of arable land, if the wood be so treated to yield sugar' This convertion of cellulose which forms a major constituent of wood, into sugar is known fairly early as a laboratory experiment and some attempts had also been initiated to make it a commercial success—but without encouraging results. It was again in 1916, when Germany was much straightened as not to be in a position to import foodstuff, that Bergius worked out this process of convertion of timber into carbolydrate by treatment with forty per cent hydrochloric acid. The process that sounds simple in words is no joke in practice. Manufacture is not a laboratory experiment where glassware and scaled tubes play the game and cost is no consideration. In this industry, the choice of a proper construction material for the plant to stand the action of the concentrated acid, the process of recovering the hydrochloric acid used and also the effective control of the temperature which greatly influences the yield —all these involve great engineering and chemical skill. The process in its present state of development promises an yield of sugar in about sixty per cent of the weight of wood treated. The plant in Germany produces 6000 to 8000 tons of sugar per year while the one in Geneva much more. In all places where wood is cheap, wood-sugar can be produced cheaper than cane-sugar. This sugar can be fermented to yield alcohol and by treatment with ammonia can be converted into yeast and proteins thus indirectly solving another food problem. To burn away wood as a fuel would seem therefore a criminal waste, an act of economic irresponsibility, while there is a method to convert it into a very valuable material.

The rayon industry—the production of artificial fibres and textiles from wood and cotton pulp—is really a wonderful project of the chemist that has mobilised to excell the shops and shows of nature. The manufacture consists in dissolving the raw material in a suitable solvent, squitting the solution through small tubes and precipitating it by acid reagents. Different methods are adopted for the same goal—there is the viscose process, cuprammonium process, acetate process, nitrocellulose process

etc. The finished product, slightly differing according to the process adopted, has got such a semblence of silk that it justifies its misnomer 'artificial silk.' It can be said to the credit of the fineness of the thread that about 5000 miles of it weighs just a pound. Very spectacular is the output of this industry which has dealt a serious blow to silk by about two hundreds firms working all over the world producing about 250 million tons of rayon per year. Rayon is the finest fashion fabric where colour is of prime importance for it can be dyed better than other fibres. To hosiery it is a gift from heaven. Day by day it is finding new and newer uses and is trying to dethrone silk and wool. It will not be very far when only rayon fibre will be used by us all. "Fifty years ago, rayon was an experiment; forty years ago it reached a stage of being a joke: thirty years ago, a few firms were interested in the manufacture: today, it dominates the world." In future, thanks to the remarkable genius of the chemist, we can have a fibre possessing the warmth of wool, elasticity and comfort of silk, cheapness of cotton and the defects of neither: age will not wither it nor custom stale its infinite variety!

Closely allied to this is the gorgeous synthetic dye industry. The conjuring colours of the organic chemist from the coaltar, in its richness and reserve, rival the hues of the rainbow and surpass the charm of the sunset. "In the dim ages of antiquity, men searched the corners of world for precious dyes: great caravans undertook perilous journeys and galleys plied the seas on similar errands: only kings and nobles could afford these luxuries". Today, chemistry, the great democratiser of all times, has brought these to bang at the doors of even the poorest. The synthetic chemist manufactures indigo, alizarin and a galaxy of other dyes in tons per day much cheaper than the plant. The capital invested in the dyestuff industries and their output, amounting to large astronomical figures, gives us an idea of the great demand and importance of the dyes today. They are required not only to produce the finest and attractive fabrics, to adorn our homes, grace the banquet hall, and beautify the ball-rooms but also in improving the sensitiveness of the photographic plates which, supplementing the microscope and telescope, widen the range of our vision. Many dyes are manufactured for the motion pictures and many more for infrared photography which is a new and admirable development enabling us to see the hidden hand of the criminal and penetrate the mist, fog and dimlight.

Extraordinary activity in the field of conveyance is one of the significant effects of modern civilisation. The motor cars, air-planes and steam lines transfer the load from the back of labour

to oil, steam and steel and shrink the world to smaller dimensions making people at the ends of the world almost the neighbours. The needs of this nebulous industry constitute a veritable museum of materials each manufactured by a wonderful process. Of these the two products of basic importance are oil and rubber.

The machinery of the modern world cannot function without oil: it consumes per day about two million barrels of gasoline. The world production of petroleum in the first half of 1935 was about 783 million barrels and the world reserve at the present rate of draining, can meet the demand only for about thirty years. So in looking out for a synthetic substitute, the foreseeing chemist has pitched upon the more abundant black and crude coal as a raw material and convert it into petrol by hydrogenating it at a high temperature and pressure. Professor Bergius got the laurels for this marvellous triumph of chemical research. This wonderful industry which is the outcome of the collaboration of "men of paplied science, industrial enterprise, engineering genius and labour craftsmanship" is, as Ramsay Mac Donald exclaimed, "an astonishing creation of thought, research and skill". Though the process looks simple, those who set up the plant to stand about 300 atmospheres and 500°C, and worked out the exact conditions to obtain a maximum yield of petrol, will talk volumes about the great difficulties that by clever thought and ceaseless toil had to be overcome. In Germany, a plant is working in the coal district, Leuna. The plant at Billingham, England, recently extended in 1933 at a cost of a million pounds treats about 500 tons of coal producing about 123 thousand gallons of petrol per day, yet meeting only 4 per cent of England's demand. This industry is bound to ramify in the near future so that Russia, America, and Persia need not dictate to the world regarding oil.

Rubber, like oil also, is not uniformly distributed in Nature as is evidenced from the fact that the British Empire alone controls about 87 per cent of the world's resources. It has thus become a pressing necessity to other countries especially Russia, America, and Germany to look to some substitute and the result is artificial rubber—rubber from potato or lime, coke and salt! In America, synthetic rubber called Duprene, is being manufactured by the Du Pond Company from acetylene by an elaborate process, the total annual output of the plant being a million pounds a year. In Russia itself there are four plants working, producing about 25,000 tons in 1935 and scheming to increase the output to 40,000 tons. They make their rubber from alcohol which in turn is got from potato by fermentation. At present a ton of alcohol yields 230 kilos of rubber and this yield is expected to be increased to 330 kilos. Artificial rubber though not quite

as cheap as natural rubber has got some commendable properties to stand the competition. It resists the action of heat, light, oils, chemicals and oxidants. Its economical value is estimated to be five times as much as natural rubber, though it has a disagreeable odour and colour. Rubber plays a remarkable part in our racing age. It has comfortably seated the world on cushions and cushioned wheels. The smooth performance of our modern motor cars, each of which boasts of at least 150 pounds of rubber, is aided by rubber mountings. Locomotion is now divorced from devilish noise and has acquired the quality of much desired silence.

Chemistry is the mistress of medicine. Before its advance, cure of disease was left to the mercy of the heaven and the luck of the individual. Today the chemist tries to combat death and stay catabolism. Many products of the synthetic chemist that issue out of the chemical industry, serve as elixirs or specifics in the shelves of the physician and surgeon. Neosalvarsan for syphilis, plasmoquin and atebrine for malaria, a host of synthetic anaesthetics and disinfectants etc, by far superior to the products supplied by Nature, are all due to the synthetic chemical industry. The wonders of modern surgery will be impossible but for the amazing development in the fields of anaesthetics, disinfectants and antiseptics that has made possible painless operations with perfect surgical cleanliness. Today uneasy lies the head that wields a knife: but safety with the patient in a modern hospital. In former times a pin-prick was an open door to death. Today even the removal of tumours or gall stones or sewing a wound in the heart, can be safely carried out with a recovery of nine in ten.

It is not fair to omit referring to the vigorously growing industry of synthetic resins used extensively in finishing, protective and decorative aspects. The marvellous Bakelite, manufactured from phenol and formaldehyde, and its manysided applications from serving trays to sensitive instruments, are quite familiar to us all. Some of the synthetic resins have got a consistency and some properties, quite encouraging to the researchers. It has also of late entered into the textile to give it a noncreasing, flexible and nonperishing finish. The condensation resins in virtue of their transparency and ease in manipulation, are used as substitutes for glass: greater application is found in the manufacture of safety glass prepared by sandwiching glass with the resins. We hear now of construction materials also being manufactured from these resins. In Germany, particularly in U. S. A. a very rapidly growing industry has been started. In the latter country during 1934 no less than five million pounds of cast-resin were manufactured. The industry is still in its infancy and we wish for it a glorious future.

There are innumerable products of the industry which are to be admired but it is scarcely possible to refer to them all. Chemistry is advancing by leaps and bounds and even the discoveries, which apparently seem to be useless in application to the services of humanity, are the foundations of big industries. For instance take the application of the inert gases in the field of lighting. In the United States alone, by the substitution of argon for nitrogen in the electric bulbs, the electric bills were reduced by 125 million dollars to 620 million dollars per year. The substitution of a mixture of xenon and krypton will still reduce it by 200 million dollars and hence an industry for the manufacture of these gases is being seriously contemplated! The more the scientist knows, he tries to give better comforts to man. In lighter vein it is said that industrial research is a method of keeping the customer reasonably dissatisfied with what he has. It is not altogether a true picture. The catholic aim of the application of science to industry is to produce more of wealth, distribute it more uniformly and give all men alike more of leisure to think of beauty and about themselves. Chemistry is succeeding in this direction. It has achieved many miracles for society. It has certainly made at least two blades of grass grow where one grew before. Good Nature is bettered by our laboratory experiments and industrial processes. World never appears "weary, stale, flat and unprofitable". Things out of hope are compassed by venturing of the chemist. When a job is to be done and all the methods have failed, a fragile, delicate man of 'god like intellect' with flasks and crucibles is invoked to and he unequivocally turns the trick! Such is the miraculous power of organised scientific research or else how can Japan market watches 'like potatoes by weight' in Switzerland, the very home of the watch industry! It is our duty to build a sanctuary for those disinterested scientists who made possible the present comforts we are enjoying.

"Those earthly godfathers of heaven's lights
That give a name to every fixed star
Have no more profit of their shining nights
Than those that walk and wot not what they are".

—*Shakespeare.*

The Hour of Vision.

There is a hush at break of day
The moment light and darkness meet
And with a kiss each other greet
While time an instant seems to stay.

And when the evening twilights shine
A gold embroidered purple pall
The magic silence rests o'er all
Making the world a land Divine.

That is the hour the Gates stand wide
The Fairy kingdom open lies
A Joy of Joies to seeing eyes
At dawning and at eventide.

—F. H. Aldhouse.

St. Patrick, or Paudeen The Pig Drover.

BY REV. F. H. ALDHOUSE, M.A.

The blessed St. Patrick learned that harmony
Brings Heaven to earth by magic sympathy.
Echo and love sweet melody below
Thus to God's Kingdom hearts will singing go.

—From the Celtic.

A herd of lively black-and-tan pigs were making their way to an oak-wood. Their awkward frisks and gamblings showed their knowledge and joy at the thought of the acorns which awaited them. They grunted a cheerful note, and ran, but never far ahead, of their young swine-herd. The boy, he was about fifteen, strode on cheerful as his charges. From time to time he played a tune on the bagpipes slung from his shoulder, and it was evident the hogs listened with appreciation. Just then a skylark rose singing from a field they were passing, up and up he went soaring and singing into the sunlight and the old blue fields of heaven. The boy ceased his own pipings and listened with rapture to the crystal clear notes of the bird. Then he softly sang what he thought were the birds thoughts :

I soar and sing
And sing and soar
The sun is King
Him I adore.
Beneath the earth ; above the skies,
Above, beneath His kingdom lies,
O living Rose of golden flame
Your glorious beauty I acclaim.

The boy ceased his ex-tempore verse-song, and the swine gave a kind of mumbling grunt which was probably applause and perhaps an encore. If it was they had a success, for the boy first began an imitation of a thrush, and then, and very accurately, mimicked several other birds. So well indeed did he do it that the songsters answered him.

A goose-girl and her flock passed by going in the opposite direction down to the lake. " Good-morning, Paudeen" the goose-girl said " I wish I could get these geese and ganders to eat acorns, then we could be listening to you. Sure you can imitate anything that sings, chirps or warbles, from a grass-hopper to a linnet. I believe you could imitate an angel if you tried." "Good

morning, Bridie" the boy Patrick answered " 'tis not in my power to imitate the like of them because I don't know how they sing and play. Do you ?" " Well it would be as joyous as the skylark, as golden as the sun, as sweet as the breath of the rose, as kind as a mother's crooning. If you could put all those into one song I believe the Angels would answer you" Bridie answered. "But I must hurry down to the Loch. Good-bye Paudeen."

All day Patrick watched the blue sky and the golden sunbeams, breathed the sweet breath of the wild flowers and listened to the lilting song of lark, linnet, thrush, robin and blackbird. And he mixed them with all the love of heart and then he played them in one tune on his pipes. All the birds joined their voices to his, and so did all the bees and grasshoppers, and the pigs ceased eating to listen, and it is hard to make them do that.

Patrick was so full of joy he stopped to hug himself in his happiness, then he looked up and saw the angel. Before he looked at her fully he thought that Bridie had come to talk to him, but how she had been able to leave her geese he could not imagine. But though the angel *did* have ever so light a resemblance to the goose-girl, she was so wonderful and beautiful and lovely that you could think of nothing but herself ; her enchanting deep blue eyes were as magical and mystical as the sea, and had as many lights in them. Her long hair flowing beneath a crown of the immortal flowers of Paradise was like the pale gold rays of the harvest moon. Her face was like a fairy rose bloom in which the white and the red were in perfect blending. All I say of her is far far below the reality. If I said she was an embodied perfect melody, or a lovely blossom, or a ray of Beauty Himself, perhaps I may convey my meaning, and not too well. She smiled and it was really bright like sunlight. " You have played very well Paudeen," she said, "You caught an echo of our harmonies. Let me play you the tune, that you may hear it as it is.',

She took a harp of burning gold from beneath her wings. She played ; by my soul that was the playing ! The sunlight delayed its going, the water in the little brook stayed as if frozen in its course. The living things, from the pigs to a flight of dragon flies, were enraptured. As for Patrick himself, it was laughing and crying at the same time he was. He forgot there was a boy named Paudeen, he forgot there was earth beneath his feet, he heard Heaven, he saw Heaven, he was in Heaven. " O take me back with you, dear little angel. Be merciful to a poor boy, God's dear little angel." "Paudeen," the angel said, "I would gladly do so ; you are God's little son and I am your sister spirit. Do you really love our Father, Paudeen?" " Is He as beautiful as you ? " Patrick inquired. " A million times more lovely than the light

itself. There is no comparison. He is Beauty itself and Love and Goodness too," the little angel assured him. "Then I love Him with all my life." Patrick said. "Work for Him here for a while. That will please Him greatly," the little angel begged and she clasped her hands. "How?" Paudeen said. "None of the people here know Him; they worship bits of carved wood and stones, and think there are evil and changeable Beings who rule. You know Him now, Paudeen. Teach them that He is above ten thousand Gods and altogether lovely, and later I will come for you. You will have been God's brave boy for it will be very, very hard, dangerous work. But when it is done, and you can do it, I will come and kiss you on the lips and we will go to Him together and be His happy children for ever and evermore." "Is that a promise?" Paudeen asked. "Yes," the little angel assured him.

From the wood of Slemish Paudeen went forth to win his spurs as God's Knight. When the great St. Patrick died in Saul, he, the apostle of Erin, mounted to his heavenly throne led by a little girl-angel who had kept her word.

Steel!

BY TANDRA DEVI

FROM our standpoint, the machine age is already dead. From our standpoint, any created thing which has death-giving elements within itself, is already finished. We but await the final disintegration, knowing the causes.

Where a cause is present, the effect is inevitable. It cannot be averted though it may be modified or postponed. In the region of man's soul the wages of mechanicalism is death. No fair present reward can mitigate that judgment. That which is for the soul, will live; that which is against the soul, will die.

It is strange to watch mankind trying to cover up the grave yawning before it with flowers of "progress", "civilisation", "modern methods", "inescapable march of science", "labour-saving", "mass production", "cheap commodities for the masses" etc., etc.,—to note the scorn with which prophets of the soul and of the simple ideals of true living and true working are received. Often that scorn becomes a pitying contempt from the superior vantage-ground of "progress" for those who have seen through the rotten structure to a better, wiser plan. So humanity must suffer, must continue to reap the multifarious punishments of its blindness, greed and folly, until through great tribulations, wars, plagues and desolations both individual and national, the right plan is perceived. For man lives out and experiences only that which he can perceive and accept. God will not force Truth upon him.

In the right plan of life, as of a building, there must be foundations in character, and superstructure in thought, in the mind, which protect man and his society from greed, power, lust, anger, fear.

Does mechanized life protect the people from greed, power, lust, anger, fear?

Think it out!

Where these rule life, there is an error in the structure of life.

We, looking at mankind from our mountains in an aether, can clearly see that a highly mechanized society is inseparable from greed—power—lust—anger—fear.

Think it out, again.

O poor little man, when will you become yourself—your mighty self which is co-equal with the stars? When will their light irradiate your councils?

There is no compromise with light. A man who would tread the stars with us, must relinquish all that partakes of greed—anger—lust—power—fear.

He must remember that "all machines, inventions, instruments and externalizations of human powers are but the preliminaries to acquiring their several functions in the human nature itself." They are but the kindergarten of life; and you, O mighty little men of this steel age, are but children playing in that kindergarten. We have no doubt but that playing without guidance, without supervision, you will hurt yourselves. Alas! that that hurt means not a small scratch or so, but agonizing death and the misery, the hopeless darkness and despair, of millions upon millions of sentient human beings............This is your fate—the fate that awaits each one of you; and even our prophets, who see and do wisely in the building, must suffer with the rest. There is no hope for any one of you, except ye are prepared thus to suffer, alone if need be, for the sake of Truth.

You cannot play with Truth. It is not of the mind. It belongs not to opinion, desires, conventions, interests, traditions, or arguments. Take it out of that rubbish heap of your laborious accumulating! Truth is as a tree—the Tree of Life—planted in that rubbish heap, but growing out of it in the purity and freedom of intuitive discernments, soul ecstacies; a Tree wherein we live as birds taking shelter. Your soul—not the rubbish heap of thoughts and desires—is this Tree of Life!

You cannot want the Tree and still live within the rubbish heap. All of life—civilization, trade and the rest—exists for the Tree, not the Tree for your exploitations.

"Poetry," says a wiseacre, "cannot be mixed with sound politics". Children! All politics are unsound which are not the outcome in opinion, in action, of pure poetry!

"But that is not practical! we live in a practical world and must deal with it on its own plane." Why waste life? Why "deal with it?" Why not deal with yourselves," and become, each one, a living Son of God in your actions and reactions? What are you wasting your time for, when death is close, or if not death, disaster? Why fight with shadows? They are foredoomed, to annihilation. Leave them to God's judgments! Why run out upon the rubbish heap and consume its filth, when God Himself is awaiting to tend the Tree of your own soul, and to make

beautiful His Garden of many Trees, and to spread His Garden over the whole world ?

For there is but one Truth—God. Did He create His sons in His Image and Likeness to feed the furnaces of a Black Country, to toil at the mills of the mighty, to grope and cower and fester in the slums of civilized cities ?

When men live in that garden, when they cultivate souls instead of tending machines, all the follies of nations will melt away. Do not attack nations ! Attack your own soul, each one, for " The Kingdom of Heaven suffereth violence, and the violent take it by storm." Storm your souls, and the barriers of the nations will disappear. For what are nations but groups of souls ?

" Go with the times," say you ? Truth has not altered since Buddha saw it, since Krishna put it into action, since Jesus spoke it. Truth is not 'the times'. " The times will go, but the Truth of the prophets will never go ! Then why do you want to 'go with the times? That, as we see it, means to go altogether—to shrivel and to expire. Poor little men. They are so anxious, like moths, to be burnt up in the false fires which glimmer and glamour in their poor half-blind eyes.

Open your eyes, and look. The sun is shining on the hills. Can your machines make these ? Out of your stuffy workshops and the stench of your poison gas factories did these rays and this glory come—can it ever come, to appease the hungry soul, to soften the hardened heart ? Look at the clouds, the rains, the rivers and the oceans. Look at the rocks ! Look—and learn—and build !

Which way will ye build, O little men riding upon a star ?

Think it out ! Think it out—before death takes his reward.

—*The Hindustan Times.*

Hinduism in Java and Bali.*

BY SWAMI JAGADISWARANANDA

THIS is the last of a series of six articles on Hindu Religion and Culture outside India, contributed by the writer by way of popularly introducing the subject to the Hindu students. The other five of the serial were published about Hinduism in Cambodia and Siam in 'Stri-Dharma' of Madras; about the same time in Ceylon and Burma in 'Prabudha Bharat' of Calcutta and about Hinduism in Indo-China in 'Vedanta Kesari' of Madras. This review-article purports to trace the survival of Hinduism at the present time in Java and Bali in the Far East.

Swami Sadanand in this unpretentious volume gives an interesting account of the ruins and remnants of Hindu cultural achievements in Indonesia from the personal experiences of his itinerant life. The book, though small, has received additional value and instruction by virtue of its being prefaced by Dr. Suniti Kumar Chatterjee of Calcutta University, who is now an accepted authority on Greater Indian History. The present work consists of a summary of some articles written by the Swami in English, Bengali, Hindi and Guzarati papers of Calcutta—articles which created a good deal of interest at the time of their publication. How we wish that our Hindu youths who uselessly pour over the trash-literature of the west turn their attention to the profitable study of such unostentatious books and thereby enlighten themselves about their glorious past. The monuments of Javanese Hinduism are now all dilapidated owing to the iconoclastic spirit of the Arab vandals who committed the same sin in North India as well. But for the Curzonian courtesy of the Java Government in protecting the Hindu ruins, the same would have been totally extinct. Hindu Java is largely Saivite in creed. There are also isolated temples dedicated to Chandi. In the museum of Botavia in Java, there are three bronze images obtained from different parts of the island. The one is a Siva Murti, a foot and an inch in height with peaked crowns on his plaited hair and a crescent moon attached to the centre. The image is well-balanced and well-proportioned, having four amuletted arms, one of which carries a Kamandalu (monk's bowl). Another murti, a Trailokya Vijaya Shiva is a four-faced figure with eight hands. Every head wears a crown and every face registers a different expression. The figure stands on prostrate body, probably of a devotee. The

* Review of "Pilgrimage to Greater India." By Swami Sadanand. Published by Hindu Mission, Kalighat, Calcutta.

third image a Tara-murti, gives a metallic form to a beautiful scriptural conception. The whole gesture of the image is that of fore-knowledge derived through trance. This introspective mood is admirably stamped into the figure which barring the ornamental details carries two lamps.

The Sultan of a populous Javanese town, named Jogjakarta, still retains the Hindu title of Bhuvana—Senapati (the General of the world). In the Javanase shadow-pantomime of leather marionetts the old legends and stories from the Ramayana and the Mahabharat are recited. The virile Javanese admires the great Hindu warrior, Arjun as she adores Sita and Rama. Many a version of adventures of the third Pandava with a strong Javanese back ground have accumulated through centuries in the shape of 'Panji' stories. Subhadra loses her identity in Chandra-Kiran (moon beam) and the story of her run-away match with Krishna-Sakha is recast in the hero's attempt to retrace the heroine through a series of wild adventures. The Swayamvara ceremony of Draupadi is screened and the princess is seen engaged in a battle of wits with Yudhistir and his four brothers. The fight of Rama and Ravana often creates a tense atmosphere in the audience, who heave a sigh of relief when at last the prince of Ayodhya flies back to his capital with the long imprisoned Sita. These Javanese Puppet-Performances known as 'Wyang Kuli' dating back to the pre-Hindu period of Javanese History have been sufficiently influenced by Hindu culture. In the dramatic performances as well as masked dances and miracle Plays of Java, Hindu mythological elements such as Ramalila and Tandava Dance have made their way. The Javanese women have also adopted the Hindu calico-printing which tempted Vasco de Gama to brave the unknown seas and come to Calicut.

The wandering author in his Javanese itineracy met in the town of Jogjakarta, a French gentleman named Mons. Jacques Demarquette, who is a Doctor of literature and philosophy. This French admirer of Hinduism was proud of calling himself a Brahmin and was profoundly affected by the teachings of the Upanishads. He showed his yajnopobita to the author and assured him that he never missed a single day his Tri-Sandhyas and Gayatri Japam. In Prambanan stands the most magnificent temple. There the main temple is that of Chandi Shiva, some 60 feethigh. The fight between Dasanana and valiant Jatayu forms the subject of the bas-relief on the stone foundation of this temple. Before the four gates of the mandira stand the four life-size images of Brahma, Bishnu, Maheswara and Sakti, each with a stone back-ground. These are big and small temples, one of them being, a temple of the Divine Bull. The great Burbudur

Shrine called correctly "Buddhism in Stone" has on its stone walls bas reliefs of Hindu parables along with Buddhist ones. At Surabaya (in Java) the largest commercial centre in the Dutch Indies, a Malabari Hindu keeps a hotel.

The pretty island of Bali bears witness to the missionary activities of the ancient Hindus. The Balinese Hindus originally migrated from Java probably in the middle of the fifteenth century. Even now with the exception of handful of Balislams the whole population consists of staunch Hindus. "The Balinese have the same hereditary idea" remarks Swami Sadananda "of caste system as we (Hindus) ourselves; they show the same reverence to their versions of the famous Indian Epics, the Ramayan and Mahabharat; their conception of Heaven and Hell is based on the doctrine of Karma; their attitude regarding the life beyond death is inspired by the teachings of Upanishads. The poorest Padanda (Priest) still receives the homages of the richest Prince. The Balinese still execute tableaux vivants of the heroes of the Epics. The islanders, being Saivas by creed, the Sivaloka constitutes their ultimate goal. The same principle of merits and demerits of the present life governs the transmigration of the soul in whose immortality they have an unshakeable belief; that is why they consider dogs as men who have been punished for their sins in their last sojourn on the earth and they never maltreat these brutes". The Balinese, like the Egyptians, mummify the dead bodies.

The cremation ceremony of the Balinese is just like that of the Hindus. The dead body is carried in a bamboo-made hearse and the Divine Garuda being the conductor of the dead to the Sivaloka its figure is put on it. The Shradha ceremony proceeds exactly in the Hindu manner and a Tantric ritual of describing a Chakra round the place to chase away the evil is followed. Mantras are continually chanted during the ceremony. A musical party just like the Bengali Kirtan, accompanies the procession carrying the dead to the cremation-ground. The religious Balinese, like the orthodox Hindus, devote their religious hours to dances held in honour of the God of gods, the Silver-white Siva-Sankara. Hinduism in its popular form is cherished by the people of Bali. The 'tani' or peasant in the field has altars devoted to the gods of rain and harvest, and the Sun. The latter is considered as a manifestation of Shiva. The goddess 'Shree', who is the divine consort of Bishnu has a prominent place in the harvest festival and Ganesh, the god of success, is also revered. Vishnu with his Garuda; the Tortoise, who held up the Vedas in the Deluge; the Ananta Naga, who represents the Divine conch, are all to be found in their proper places: most of these attendants

are carved along with Nandi and the Bull of Siva on the entrance columns of a temple. Siva's divine consort is however Ranada in Bali and not Parvati as in the main land of Hindusthan. Ranada, unlike Parvati, represents the spirit of destruction and recreation. The Red-Brahma on his sacred Hamsa lends colour to the portals of every house, but it is Shiva, who is generally worshipped. The Mandiras, as in India, have Vedis and Chandratapas. The chandana wood is mainly used for the *Homa* and saw-dust from it goes to prepare the incense for the Puja. Most of the houses have temples attached to them where all four castes, the Brahmin, the Kshatriya, the Vaishya and the Sudra that exist in Bali, have a right to worship the Deity. The Balinese names are sanskrit Hindu names, such as Suryasuta, Rabisuta etc. They feel proud of calling themselves descendents of the Chandra Vamsa and Surya Vamsa of India. The Great God Shiva is not represented in lingam, but in person. He has a Chakra and not His usual trident. In our Purana Shiva is found once only to use a Chakra and that at the time of cutting into pieces the dead body of Sati. The classical side of the histrionic art in Bali is supplied by the Hindu epics. The religious people are given there as in India, tilaka, chandana and charanamrita by the priests.

The Puja ceremony of the Balinese is quite similar to ours. The *Abhiseka* ceremony begins with the removal of faded flowers of the previous day from the vigraha, which is then bathed in holy water and covered with the paste of white chandana. Fresh garlands are heaped upon it and Naivedyas or offerings. are arranged. The conch is blown, the gong is sounded and the little bell in the hand of the priest tinkles as he waves the lighted five-lamp before the Deity. The smell of incense and flower blends with the *Ahuti* and creates a proper atmosphere for worship. In the midst of 'gamelon' music the offerings are carried one by one to the altar and blessed by the priest. When they are returned to their receptacles the priest distributes the charanamrita to the mass and all fall on their knees in their silent thanks-giving. Men bare their heads while women pay no attention to their costly dress but along with their children fold the palms and bow before the god. A solemn grandeur reigns as they rise and file back homeward mutely with their offerings. When an Indian Hindu witnesses these Hindu rites in Bali he is inclined to think that Bali is a part of Hindu India.

The book is illustrated with twelve beautiful plates of Hindu gods and goddesses in Java and Bali. One chapter is devoted also to the description of surviving Hindu culture in Cambodia. History of Hinduism outside India is as interesting as that of the mainland. In these days, when Hinduism is spreading once again

to the countries where even Buddhism never reached will not the Hindu leaders make it possible to divine means to preserve Hindu culture in Bali, Java and other places in the Far East? The monks of the Ramakrishna-Vivekananda order are trying their best to preserve and popularise Hinduism in Ceylon and Burma, as they are doing in Europe and America to popularise it. But steps should be taken as early as possible to organise a mission of selfless workers, particularly monks, to be posted permanently in Siam, Cambodia, Java, Bali and Indo-China to revive the faith. A new lease of life will then be granted to cultural and even political India by renewing and strengthening bonds of cultural amity and unity between Hindu India and Buddhist countries.

It is understood that a branch of Hindu Mahasabha is doing good work in Siam as in Burma. But the Hindu Mahasabha is handling only the urgent and important issues of the day, i.e. the social and political problems of the Hindus. But in the Buddhist world Hindu cultural and religious activities will attract genuine sympathy from the Buddhists, as I know from my personal experiences as a Hindu missionary in Ceylon and Burma. Ashramas should be started in the Phillipines, Siam, Cambodia, Java, Bali and other places by a batch of educated and efficient workers, preferably monks, to annihilate the demarcation and emphasise the unity between Hinduism and Buddhism. If the Hindu Mahasabha or Hindu Mission or some such Hindu organisation takes up the work the money necessary will be forthcoming. Such ashramas, once started may be conducted by the Hindu begging Friars without any funds. Moreover there are Hindus in those countries, either on trade or service, who always evince sufficient enthusiasm to support such a cause. It ais lso learnt that many Hindu institutions and temples have thus come into being in South Africa and South America.

Hinduism is out for worldwide expansion in the modern age. If some Hindu leaders take up the work nothing will be wanting. But who will blow the bugle? We have in India a legion of Hindu princes and merchants who are ready to help such a movement. It is a piece of happy news that the Maharajah of Tipperah (Bengal) has recently promised to bear the cost of a Hindu Temple in London. In a country like India where lakhs of Hindu monks are idling away their precious lives in useless gossips some, like Swami Satyananda, will certainly come forword to carry the cross, and they are only waiting for the timely call of the pioneers. Those who are versed in Sanskrit may very well be accommodated in Buddhist monasteries of even China and Japan as there is sufficient enthusiasm nowadays in Buddhist countries to learn Sanskrit. Educated Hindu youths at the present time find pleasure

in treading the path of adventures to become recognised champions in swimming, flying, globe-trotting and what not? Why not some of them make cultural enterprises and work for their faith in foreign lands? Deck-passage to such countries is cheap and the greater India Society of Calcutta will provide them with some privileges also. In the western countries youths, after completing their college carrer, devote two or three years to missionary or military work. Why not Hindu youths follow this example and spend their life for such a noble cause? If so many of them are ready to embrace death for the political freedom of their motherland, why not some of them risk their life for the cultural expansion which is, in fact, the desideratum of the day? Hindiusm is destined to live as a profound cultural force in the world. This statement will at once carry conviction if we know that a penniless Hindu monk has been doing excellent preaching work in Norway for a number of years. May I most humbly draw the kind attention of the world-famed Hindu leaders, such as Mahatma Gandhi, Pandit Jawaharlal and others to this cultural problem of our country?

The Scholar Science Corner.

By B. H. IYER, M. Sc., A. I. I. Sc.

Neonymology.

Neonymology is the science of coining new words. This branch of knowledge has wide application in the languages of the modern industries. The names of the numerous plastics, the names of the various patent medicines, chemicals and dyestuffs are all examples of the application of neonymology. Dr. William A. Hamor, Assistant Director of Mellon Institute of Industrial Research, is considered as the pioneer worker in the field of neonymology. The publication of a book with the interesting title *The Farm Chemurgic* has earned the title of 'neonymologist' for its author Dr. W. J. Hale. In the preface to this book Dr. Hale defines the meaning of *chemurgic* as follows: *Chemurgy* from the Greek roots for chemistry and work, is *the science concerned in the working with and for chemical compounds.* An editorial comment in the June issue of *Chemical and Metallurgical Engineering, page 315*, enlarges upon this meaning and says: " To-day its (i.e. Chemurgy) most popular application is to the producion of chemicals from agricultural raw materials".

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Power Alcohol: A Chemurgic Problem,

The adaptability of power alcohol for use as fuel in internal combustion engines, especially in automobile engines, is a problem much discussed among industrialists, chemists and engineers. At present there are a few countries where admixture of a definite percentage of locally made alcohol with the petrol for use as motor fuel is enforced by law. On the one hand, the oil technologist—conscious of the cheap but not inexhaustible stock of natural oil and proud of their achievement in profitably synthesising same oil from coal and tar—maintain that the performance of alcoholcum-petrol driven engine is poor and that the life of such an engine is shortened. Further they apprehend that the price of the petrol blended with anhydrous alcohol may be higher than petrol itself. On the other hand, the pro-power-alcohol propagandists argue that with the increasing production of alcohol the objection on the basis of cost would vanish. Efforts to increase production of alcohol would mean a wider use of raw materials from the soil which in turn would result in bettering the farmer's lot. Regarding the efficiency of the mixed fuel, it is claimed that the low percentage blends under present consideration can probably be used interchangeably with gasoline without

any very noticeable effect on engine performance. These and similar views were expressed and discussed by a huge body of chemists and engineers, farmers and industrial executives who assembled at the Second Dearborn Conference of the Farm Chemurgic Council held in Detroit in May last.

America is rich in natural mineral oil. But America is an agricultural land also. And in order to safeguard the farm and the farmer, Americans want to uphold the claim for power alcohol. Therefore the views expressed at that conference are of interest to an agricultural country like India whose wealth of mineral oil is nil, whose agriculturists are finding life unbearable due to economic stringency, whose potential agricultural raw materials require working up, whose modern sugar factories are throwing out or trying to export tons of molasses and whose educated youth are joining in multitudes the League of the Unemployed year after year.

Mr. F. P. Garvan, President of the Farm Chemurgic Council advocated the use of alchohol produced from corn or other agricultural raw materials as motor fuel. The following extracts from a report of the proceedings of the conference should provoke fruitful thought in India. (vide *Chemical and Metallurgical Engineering, June 1936*).

" Power alcohol it seems to us, is not so much a problem of technology and economics as it is of agricultural distress and farm relief. So we repeat that there should have been no controversy—least of all among technical men. From a strictly chemical engineering view point, it is a bit unfortunate that the power alcohol problem is not one that can be readily solved by purely technical and economic reasoning. It has social and political implications that cannot be easily evaluated, yet nevertheless are controlling factors to-day in many countries of the world.

" Mr. Garvan had made the point that we are using up our oil reserves at a rate which will mean exhaustion in 12 or 13 years, with no provision for increased consumption or war need in case of an emergency. He accused the oil industry of opposing the use of alcohol in order to dispose of its vast holdings of foreign oils. After that is accomplished, according to Mr. Garvan's view the German I. G. and their American Associates, have arranged to monopolise control through the hydrogenation process. But by far his most telling arguments for power alcohol were a series of advertisements of American-owned companies in England and the Phillipines, promoting the use of much higher blends of alcohol and gasoline than have been suggested in this country. If the 33½ per cent alcohol fuel marketed in England by American affiliates of the Standard Oil Co. of New Jersey and the Cities Service Co. were adopted in this country, it would mean the putting of 90,000,000 acres and 6.000 000 unemployed back to work.

" A chemical engineer, proud of his agricultural antecedence and early years on a Kansas farm, is Professor Arthur W. Hixon of Columbia University. He did not hesitate to make his diagnosis of farm ills and then pronounce his remedy. Agriculture, he said, had changed from an independent, profitable, self-sufficient, economic unit in 1914 to a dependent, unprofitable unit to-day. One of the reasons often overlooked is the loss of

the power market which prior to 1914 was supplied by horses and mules raised on the farm. A decrease of 10,000,000 horses from 1919 to 1929 meant a tremendous loss in the market for grain and in the return of organic nitrogen to the soil. It was also a great incidental source of revenue. If alcohol from corn would help the farmer to regain even a small part of the power market, Professor Hixon thinks he is entitled to it. But the best long time remedy he prescribed is a complete reorganisation of agricultural research by staffing the experiment stations with research chemists and chemical engineers from industry who will give agriculture a new vision."

* * * *

Soya beans for Ford Cars.

Soya beans are good not only for human bodies but for motor car bodies as well. The story of how such a lowly bean as the 'Soy' has come to occupy a premier seat among the industrial raw material is told by R. L. Taylor in his article on "How Soybeans Help Build Fords" (vide *Chemical and Metallurgical Engineering, June 1936*). Although soyabean has been grown in the Far East for over fifty centuries now, its industrial importance is being recognised only in recent years. Within a short period after introducing the soy into America, the Americans discovered the industrial possibilities of this cheap cereal and strived hard for the past one decade to establish their present much coveted soyabean industry. The bean, containing as it does roughly 20 per cent of oil, 40 per cent of a fine quality protein and 2 per cent of lecithin, has proved a very useful raw material for many industries.

"The problem which led to the soybean development at the Ford Motor Co. was first presented by Mr. Ford to a small group of his officials in 1930. The work was to be a forward step in carrying out his programme for the decentralization of industry—in the forging of a closer linkage between agriculture and manufacturing. At that time, he was searching for some product of the soil which could be incorporated into the manufacture of automobiles. A year was spent in working with the various farm crops. Of the entire number investigated, the most promising seemed to be the soybean, with its casein which could be used in plastics and its 20 per cent of oil which suggested a new source of vehicle for paints and body enamels. Having established the value of the bean, and since the original purpose of the experiment was decentralization, the objective became one of developing a simple oil extraction process which could be operated in a farm community by the individual farmer or co-operatively by a group".

Accordingly a small plant for extracting oil from the soy has been designed. Hexane is used as the solvent in this process. The plant claims to work satisfactorily and can handle 500 lbs. of beans per hour. The entire operation process can be controlled by one man. The component units of this plant are a flaker, a continuous extractor, a filter and a solvent recovery system. The details of the plant are given in the article.

The soyabean oil and the meal find a wide variety of uses in the manufacture of the Ford automobiles. The oil finds application chiefly for body enamels and the meal for plastic substances.

"For this purpose, part of it (oil) is mixed with a small amount of tung oil and used as the enamel vehicle, and part is used in the manufacture of a glyptal resin which serves as the base of the Ford body enamels. This reason is being supplied partly by production at the Ford plant and partly by other companies according to the Ford specifications. The general process followed in the production of the resin consists of, first, hydrolysis of the oil with Twitchell's reagent to yield glycerine and fatty acids, second, addition of more glycerine and then finally, treatment of the mixture with phthalic anhydride.

"Some of the oil is being used in the foundry as a sand-core binder. For this use, one part of the fresh oil is mixted with one part of an oil which has been heated with a natural resin. Experimentation has shown that blown soybean oil may be used in the production of artificial leather.

"Lecithin, a phosphorous-containing glycerol ester or phosphotide having valuable emulsifying anti-oxidant properties is found in the bean to the extent of about 2 per cent, and comes out with the oil in the extraction process. The substance is not being isolated at the present time, although its use as an anti-oxidant in rubber is being investigated experimentally. It is claimed that bean oil from which the lecithin has been removed is inferior for lubrication purposes, but its properties affecting other uses are unchanged.

"The extraction process leaves a residual meal containing, on a dry basis approximately 48 per cent protein, the major portion of which is casein, 38 per cent carbohydrates, 7 per cent cellulose, and 7 per cent ash. Making use of this high casein content, the production of molding plastics consumes the greater part of the meal, requiring over 4,000,000 lbs. per million cars".

The oil free meal is converted into a phenolic and casein formaldehyde plastic which is water-proof as well as durable. The Ford factory has machinery capable of working up of 100 tons of plastic material per day. Gear shift knobs, horn buttons, light switches, distributor caps, distributor bars, coil caps, coil plates and window frames are all manufactured from this soy-plastic.

"With a production of one million automobiles annually, the Ford company will require for all purposes more than 450,000 bushels or 28,000 acres of soybeans each year. At the present time the company owns only 12,000 acres planted in beans, which is more than enough to take care of its meal demand. In the future Mr. Ford hopes and expects to depend on independent farmers or the co-operative, community extraction units for the bulk of the supply, buying only the oil and leaving the meal to be used as stock feed. He would thus encourage decentralization of industry and strengthen mutual relations between agriculture and industry."

To the question as to which part of the Farm Chemurgic program appeared most promising to him, Mr. Henry Ford seems to have answered: "The plastics field is the greatest in the industrial world to-day. Sometime I hope we may be able, to grow an automobile. Certainly the farm will furnish most of the automobile body of the future."

Purusa and Prakriti.

BY MAHENDRA LAL DUTTA

FROM pure existence comes the infinity of space, from equilibrium state comes the tendency to procreation, then comes life; firmament comes next, then fire or effulgence comes out (the Sun); from fire comes the earth, from the Earth comes the beings.

Pure existence is inconceivable in mind. For in that stage the knower and the known become the same. The cogitation can reach as far as the state of equilibrium leaving out a hankering to come to the final stage which is higher than the state of energies. But in the downward course, we see the tendency to procreation or manifestation. This emanation brings on life or potentiality in the manifestation.

The mass of undifferentiated energy is then conceived of to be differentiated into different classes of energies according to vibration. These vibrations will bring out qualities. And when more than one quality is focussed in some specied location, we first get the notion of form. This is why an atom is called 'Chitjadagranthi' or the tie-knot between the mental and the physical planes.

The higher stage beyond the formation of solidarity is called super-sensuous state, and the lower region is called the sensuous or the sense-bound sphere. The super-sensuous state otherwise known as super-conscious state is to be perceived and conceived by the finest attenuated nerves, for argument means duality and doubt. Reasoning is balancing one set of ideas against another, and doubt and possibility is the result. Now, in the super-conscious state everything is affirmative; certitude is the motto, for duality is fast fading away. Contradictory terms or interdependent ideas are all fading away ; and a single idea or a single current of energy, passing through the real world or manifestation then comes out. Whereas in the lower region or the cogitation through gross nerves the world is evanescent; for there is no certitude for anything, and every conceivable object is subject to time and place which are themselves changeable and transitory.

Now from the aglutinous state of qualities we have 'Anu'. This 'Anu' is beyond our comprehension, for it has only one dimension. 'Dyanu' has two dimensions and 'Trasarenu' has three dimensions. We can think of 'Trasarenu' only. But 'Anu' and 'Dyanu' we cannot think of but must suppose as to their

existence, form and solidarity from this 'Trasarenu'. This 'Trasarenu' is supposed to be the minute conceivable bit of atom. Now, this atom is a bit of energy, propelled by energy and enveloped with energy. The question comes why the energy is divided into three sections. The centre or central energy must be admitted as to bring out a separate location and separate existence. The vibration comes because there is a centre. The central energy is the first starting point. Then we have the periphral energy which is keeping up the dimensions and solidarity of the atom. But beyond this peripheral we have the enveloping energy.

This enveloping energy is a sort of buffer or protective energy which is keeping the atom as not to be collided with other bits of atom in violent commotion. When we say or think of two, we think of the intervening space beyond the two entities. This intervening space is a living, vital force or 'Prana' in the object. By the centrifugal force it is warding off other atoms from coming into collision. But the centripetal force is bringing other atoms into near position. It is now the atoms remaining in juxtaposition, will form a mass or lump. On the other hand by the centrifugal agency it will dissolve a mass and bring out the original starting atoms. It is thus creation and destruction come in the same state. The other aspect is that this enveloping space, known as dormant state of energy, is conjoining the atoms in near position; dissolving their qualities into vibration and finally to the purest state of energy or the state of equilibrium. On the other aspect from this equilibrium of energy known as dormant energy, the vibrations are coming out and from vibrations qualities and from qualities the conceivable dimensions are formed out. This is how from the energy comes the creation. This is the main point wherein Indian philosophy differs from the non-Indian school of thought. Whatever might be the difference of opinion in different schools of philosophy, on this point all will agree. But the non-Indian school of philosophers cannot come up to this point and view the manifestation in the light of the Indians. Now, I have said before that in atom we have three sections of energy,—the central, the periphral and the enveloping. The central one keeps up the distinct entity, for without the centre there cannot be orbit. This is called the theory of vibration. Now the perephral energy or the energy surcharging the atom is acting or in a state of high agitation. But when compared to the enveloping energy which is the best portion or the vivifying agency in the atom, we might call the atomic energy to be less active, and the enveloping energy to be more active, emanating and procreative. Now the active energy or perephral energy has potentiality in it and the enveloping energy is the active

auxiliary to the atomic or periphral energy. Roughly speaking, the enveloping energy is doing the greater amount of work,—solidification and resolution. Whereas the atomic or periphral energy is a potential one, the enveloping energy is auxiliary to the potential one. To speak in Indian phraseology, the atom is called ' Purusa '. It is active and potential but compared to the enveloping or ' Abarani Sakti ' it is less active. Hence Prakriti is in high tension of activity or manifesting power than the ' Purusa '. In poetical language the one is called the male and the other is called the female. Philosophically this theory is alright. The different sections of energies are very finely made out to explain the manifestation, the cohesion, the conglomeration and the final dissolution of the mass. This is called the theory of ' Prakiti, and ' Purusa '.

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The hawthorn bushes guard the pool
Where only moorhens may be seen:
Hawthorn and furze compose a screen
Shading the waters clear and cool.
Yet other lives we cannot see
Are there, but keep their secrecy.

The Faery Kingdom is so near
In which the Folk of Peace abide
Faintly their singing we can hear;
Hardly their lovely forms they hide
Strange ripples break the water's calm
Music half heard falls sweet as balm.

No earthly breezes eddy so
More fragrant than wild honey sweet
Are those soft melodies so low
The ear can their refrain repeat
But as a dream song in a dream
Remote as starlight's mystic beam.

Far is the city's hideous strife
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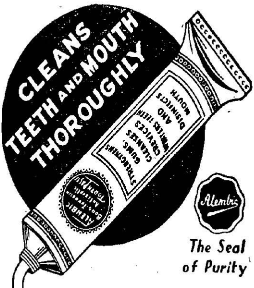

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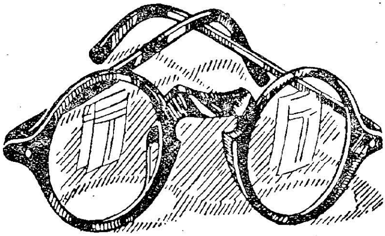

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